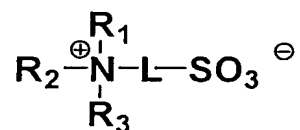


## CLAIMS

1. An ink for inkjet printing, which comprising:  
at least one of water and a water-miscible organic  
solvent;

a dye; and

a compound represented by formula (A):

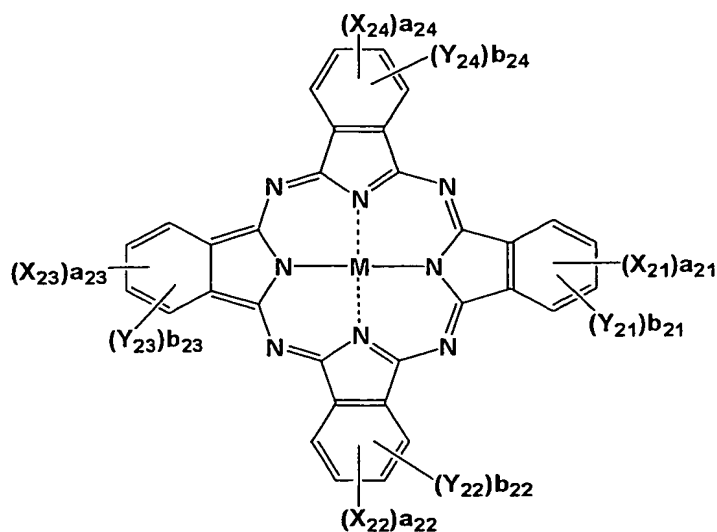


wherein R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> each represents an alkyl group, an aryl group or a heterocyclic group, and at least two of R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are mutually connected to form a cyclic structure; L represents a divalent connecting group; and at least one of R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and L is a group having 8 or more carbon atoms.

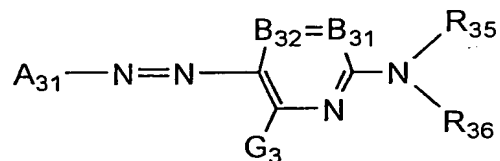
2. The ink for inkjet printing according to claim 1, wherein the dye is at least one selected from the group consisting of dyes represented by formulae (1) to (4):

formula (1):  $(\text{A}_{11} - \text{N} = \text{N} - \text{B}_{11})_n - \text{L}$

formula (2):



formula (3):



formula (4):  $A_{41}-N=N-A_{42}-N=N-A_{43}$

wherein in formula (1),

$A_{11}$  and  $B_{11}$  each independently represents a heterocyclic group that may be substituted;

$n$  represents 1 or 2; and

$L$  represents a hydrogen atom, a monovalent substituent, a single bond or a divalent connecting group,

wherein when  $n$  is 1,  $L$  represents a hydrogen

atom or a monovalent substituent and  $A_{11}$  and  $B_{11}$  are both monovalent heterocyclic groups; and

when  $n$  is 2,  $L$  represents a single bond or a divalent connecting group,  $A_{11}$  represents a monovalent heterocyclic group and  $B_{11}$  is a divalent heterocyclic group;

in formula (2),

$X_{21}$ ,  $X_{22}$ ,  $X_{23}$  and  $X_{24}$  each independently represent  $-SO-Z_2$ ,  $-SO_2-Z_2$ ,  $-SO_2NR_{21}R_{22}$ , a sulfo group,  $-CONR_{21}R_{22}$ , or  $-COOR_{21}$ , wherein  $Z_2$  independently represents an alkyl group, a cycloalkyl group, an alkenyl group, an aralkyl group, an aryl group or a heterocyclic group, each of which may be further substituted; and  $R_{21}$  and  $R_{22}$  each independently represents a hydrogen atom, an alkyl group, a cycloalkyl group, an alkenyl group, an aralkyl group, an aryl group or a heterocyclic group, each of which may be further substituted;

$Y_{21}$ ,  $Y_{22}$ ,  $Y_{23}$  and  $Y_{24}$  each independently represents a monovalent substituent;

$a_{21}$ ,  $a_{22}$ ,  $a_{23}$  and  $a_{24}$  represent the number of  $X_{21}$ 's,  $X_{22}$ 's,  $X_{23}$ 's and  $X_{24}$ 's, respectively, and each independently represents a number of 0 to 4, provided that all of  $a_{21}$ ,  $a_{22}$ ,  $a_{23}$  and  $a_{24}$  are not 0 at the same time, wherein when any of  $a_{21}$ ,  $a_{22}$ ,  $a_{23}$  and

$a_{24}$  is 2 or more, a plurality of  $X_{21}$ 's,  $X_{22}$ 's,  $X_{23}$ 's and  $X_{24}$ 's is mutually the same or different;

$b_{21}$ ,  $b_{22}$ ,  $b_{23}$  and  $b_{24}$  represent the number of  $Y_{21}$ 's,  $Y_{22}$ 's,  $Y_{23}$ 's and  $Y_{24}$ 's, respectively, and each independently represents a number of 0 to 4, wherein when any of  $b_{21}$ ,  $b_{22}$ ,  $b_{23}$  and  $b_{24}$  is 2 or more, a plurality of  $Y_{21}$ 's,  $Y_{22}$ 's,  $Y_{23}$ 's and  $Y_{24}$ 's is mutually the same or different; and

M represents a hydrogen atom, a metal atom, a metal oxide, a metal hydroxide or a metal halide;

in formula (3),

$A_{31}$  represents a 5-membered heterocyclic ring;

$B_{31}$  and  $B_{32}$  each represents  $=CR_{31}-$  or  $-CR_{32}=$ , or either one of  $B_{31}$  and  $B_{32}$  represents a nitrogen atom while the other one represents  $=CR_{31}-$  or  $-CR_{32}=$ ;

$R_{35}$  and  $R_{36}$  each independently represents a hydrogen atom, an aliphatic group, an aromatic group, a heterocyclic group, an acyl group, an alkoxy carbonyl group, an aryloxy carbonyl group, a carbamoyl group, an alkylsulfonyl group, an arylsulfonyl group, or a sulfamoyl group, each of which may further have a substituent;

$G_3$ ,  $R_{31}$  and  $R_{32}$  each independently represents a hydrogen atom, a halogen atom, an aliphatic group, an aromatic group, a heterocyclic group, a cyano

group, a carboxyl group, a carbamoyl group, an alkoxy carbonyl group, an aryloxy carbonyl group, a heterocyclic oxy carbonyl group, an acyl group, a hydroxy group, an alkoxy group, an aryloxy group, a heterocyclic oxy group, a silyloxy group, an acyloxy group, a carbamoyloxy group, an alkoxy carbonyloxy group, an aryloxy carbonyloxy group, an amino group, an arylamino group, a heterocyclic amino group, an acylamino group, an ureido group, a sulfamoylamino group, an alkoxy carbonylamino group, an aryloxy carbonylamino group, an alkylsulfonylamino group, an arylsulfonylamino group, a heterocyclic sulfonylamino group, a nitro group, an alkylthio group, an arylthio group, an alkylsulfonyl group, an arylsulfonyl group, a heterocyclic sulfonyl group, an alkylsulfinyl group, an aryl sulfinyl group, a heterocyclic sulfinyl group, a sulfamoyl group, a sulfo group or a heterocyclic thio group, each of which may be further substituted; and

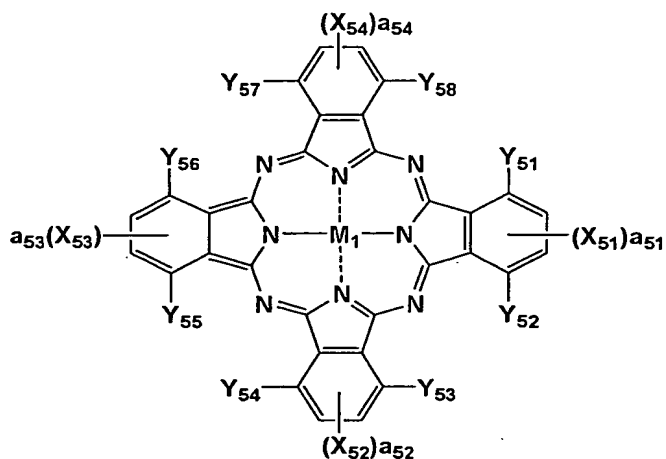
$R_{31}$  and  $R_{35}$ , or  $R_{35}$  and  $R_{36}$  may be bonded to form a 5- or 6-membered ring; and

in formula (4),

$A_{41}$ ,  $A_{42}$  and  $A_{43}$  each independently represents an aromatic group or a heterocyclic group, each of which may be further substituted;  $A_{41}$  and  $A_{43}$  are

monovalent groups, while  $A_{42}$  is a divalent group.

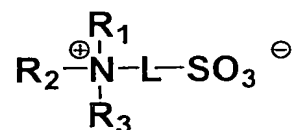
3. The ink for inkjet printing according to claim 2, wherein the dye represented by formula (2) is a dye represented by formula (5):



wherein  $X_{51}$ ,  $X_{52}$ ,  $X_{53}$ ,  $X_{54}$ , and  $M_1$  have the same meaning as  $X_{21}$ ,  $X_{22}$ ,  $X_{23}$ ,  $X_{24}$ , and  $M$  in formula (2), respectively;  $Y_{51}$  and  $Y_{52}$  have the same meaning as  $Y_{21}$  in formula (2);  $Y_{53}$  and  $Y_{54}$  have the same meaning as  $Y_{22}$  in formula (2);  $Y_{55}$  and  $Y_{56}$  have the same meaning as  $Y_{23}$  in formula (2);  $Y_{57}$  and  $Y_{58}$  have the same meaning as  $Y_{24}$  in formula (2); and  $a_{51}$ ,  $a_{52}$ ,  $a_{53}$  and  $a_{54}$  each independently represents an integer 1 or 2.

4. An ink set for inkjet printing, which comprises an ink according to any one of claims 1 to 3.

5. An inkjet recording material, which comprises:  
a substrate; and an ink receptive layer on the substrate,  
wherein the ink receptive layer includes a compound  
represented by formula (A):



wherein R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> each represents an alkyl group, an aryl group or a heterocyclic group, and at least two of R<sub>1</sub>, R<sub>2</sub> and R<sub>3</sub> are mutually connected to form a cyclic structure; L represents a divalent connecting group; and at least one of R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub> and L is a group having 8 or more carbon atoms.

6. The inkjet recording material according to claim 5, wherein the ink receptive layer further contains a water-soluble resin.

7. The inkjet recording material according to claim 6, wherein the water-soluble resin is at least one selected from the group consisting of a polyvinyl alcohol resin, a cellulose resin, a resin including an ether bond, a resin including a carbamoyl group, a resin including a carboxyl group, and a gelatin.

8. The inkjet recording material according to claim 6 or 7, wherein the ink receptive layer includes a crosslinking agent capable of crosslinking the water-soluble resin.

9. The inkjet recording material according to any one of claims 5 to 8, wherein the ink receptive layer further includes a fine particle.

10. The inkjet recording material according to claim 9, wherein the fine particle is at least one selected from the group consisting of a fine silica particle, a colloidal silica, a fine alumina particle and a pseudo-boehmite.

11. The inkjet recording material according to any one of claims 5 to 10, wherein the ink receptive layer further includes a mordant agent.

12. The inkjet recording material according to any one of claims 5 to 11, wherein the ink receptive layer is a cured layer formed by:

applying a first solution on a substrate to form a coating layer, the first solution containing a fine



particle, a water-soluble resin, and a crosslinking agent;  
and

applying a second solution on the coating layer, the second solution having a pH of 8 or more, so that the coating layer is cured by a crosslinking reaction to form the cured layer,

wherein the applying of the second solution is performed one of:

(1) at the same time as the applying of the first solution; and

(2) in the course of drying the coating layer and before the coating layer starts to show a falling drying rate.

13. An inkjet recording method, which comprises discharging a droplet of an ink according to any one of claims 1 to 3 on an inkjet recording material, so as to form an image or a character.

14. An inkjet recording method, which comprises discharging a droplet of an ink on an inkjet recording material according to any one of claims 5 to 12, so as to form an image or a character.

15. An inkjet recording method according to claim

14, wherein at least one ink contains a betaine compound.

16. The inkjet recording method according to claim 15, wherein the betaine compound is a compound represented by formula (A) according to claim 5.

17. The inkjet recording method according to claim 15, wherein at least one ink is an ink according to any one of claims 1 to 3.

18. A method for producing an inkjet recording material, which comprises:

applying a first solution on a substrate to form a coating layer, the first solution containing a fine particle, a water-soluble resin, and a crosslinking agent; and

applying a second solution on the coating layer, the second solution having a pH of 8 or more, so that the coating layer is cured by a crosslinking reaction to form a ink receptive layer,

wherein the applying of the second solution is performed one of:

(1) at the same time as the applying of the first solution; and

(2) in the course of drying the coating layer and

before the coating layer starts to show a falling drying rate.